

**WHAT IS CLAIMED IS:**

1. A monitoring system for drawing an optical fiber, comprising:
  - a scattering monitor housing provided on a path drawing the optical fiber and
  - 5 having holes aligned on upper and lower ends of the scattering monitor housing with the optical fiber passing there-through;
  - a reflecting plate surrounding the optical fiber in the scattering monitor housing for reflecting light scattered from the optical fiber;
  - a light condenser for converging the light reflected from the reflecting plate; and,
  - 10 a light detector for detecting the converged light and generating a corresponding electrical signal.

2. The monitoring system according to claim 1, further comprising a controller for measuring the power of the electrical signal and comparing it to a predetermined reference
- 15 value.

3. The monitoring system according to claim 2, wherein the controller further includes means for determining a non-uniform profile of the optical fiber based upon the measured electrical signal.

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4. The monitoring system according to claim 2, wherein the controller further comprises means for stopping the drawing process if the power of the electrical signal is substantially greater than the predetermined reference value.

5            5. The monitoring system according to claim 2, wherein the controller further comprises means for warning an operator if the power of the electrical signal is substantially greater than the predetermined reference value.

6. The monitoring system according to claim 1, wherein the light detector is a  
10 photodiode.

7. The monitoring system according to claim 1, wherein the light detector is a  
CCD camera.

15           8. The monitoring system according to claim 1, wherein the light detector is a CdS  
cell.

9. The monitoring system according to claim 1, wherein the light condenser  
includes a convex lens.

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10. The monitoring system according to claim 1, wherein the light condenser  
includes an aspherical lens.

11. The monitoring system according to claim 1, wherein the light  
condenser includes a combination of convex and aspherical lenses.

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